

alternative combinations for the actuator apparatus in use respectively ~~execute~~ a first operation and a second operation,

the or each valve arrangement in a first position being rotatable within the housing member whereby the partitions alter coupling connection between the ports of the housing member and the piston means in a predetermined sequence, and

at least one valve arrangement being axially movable to a second position wherein the partitions differently alter the coupling connection between the ports of the housing member and the piston means in a change to the predetermined sequence.

50. (New) An apparatus according to claim 49, wherein the second means is removable for replacement with an alternative valve means operable to supply fluid according to an alternative sequence.

51. (New) An apparatus according to claim 49, further comprising an intermediate means to which driving forces are provided by the piston means, and which convey driving forces to an item being driven.

52. (New) An apparatus according to claim 51, wherein the item is an item of tooling or a pile element.

53. (New) An apparatus according to claim 51, wherein the intermediate means provides for movement to align the tooling.

54. (New) An apparatus according to claim 53, wherein the alignment movement is provided hydraulically or pneumatically.

55. (New) An apparatus according to claim 51, wherein the intermediate means conveys forces to clamping members by which a workpiece is clamped, in use.

56. (New) An apparatus according to claim 51, wherein the clamping members extend at an angle to the intermediate means to allow side or end clamping of a workpiece.

57. (New) An apparatus according to claim 51, wherein the intermediate means is elongate.

58. (New) An apparatus according to claim 57, wherein the intermediate means extends to one side of the common member

AB Now mentioned

59. (New) An apparatus according to claim 56, wherein the clamping members extend substantially perpendicular to the intermediate means.

60. (New) An apparatus according to claim 51, wherein the intermediate means extend through a passage within the piston means, and has enlarged heads against which the piston means may act in either of two opposite directions.

Bob
61. (New) An apparatus according to claim 49, comprising resilient members against which the piston means acts, in use.

62. (New) An apparatus according to claim 61, wherein the piston means is isolated by the resilient members from direct impacts, whereby to create vibratory driving forces.

63. (New) An apparatus according to claim 61, wherein the piston means creates impact forces when the resilient members are fully compressed.

64. (New) An apparatus according to claim 49, wherein the apparatus is adapted for resilient attachment to a mounting arrangement by means of which the apparatus may be supported by a conventional support arrangement.

65. (New) An apparatus according to claim 64, wherein the support arrangement is operable to apply crowd forces to the apparatus.

66. (New) An apparatus according to claim 64, wherein the support arrangement is able to supply pressurized fluid to the apparatus.

67. (New) An actuator apparatus comprising:
a housing member having walls formed with forts for a pressurized fluid,

a first means housed in the housing member, the first means being a piston means displaceable in the housing member,

a second means housed in the housing member, the second means comprising a valve arrangement, the valve arrangement being transiently coupled to the piston means and the ports of the housing member and including partitions,

wherein at least one of the first and second means is removable or replaceable from the housing member to provide alternative combinations for the actuator apparatus,

the valve arrangement being operable to supply the pressurized fluid to the piston means whereby the piston means creates driving forces,

alternative combinations for the actuator apparatus in use respectively execute a first operation and a second operation,

the valve arrangement in a first position being rotatable within the housing member whereby the partitions alter coupling connection between the ports of the housing member and the piston means in a predetermined sequence, and

the valve arrangement being axially movable to a second position wherein the partitions differently alter the coupling connection between the ports of the housing member and the piston means in a change to the predetermined sequence.

68. (New) An apparatus according to claim 67, wherein the piston means has first and second faces and the valve arrangement has a first axial position at which a wider fluid path is provided to the first face of the piston means than to the second face, and is movable to a second axial position at which a narrower fluid path is provide to said first face than to the second face.

69. (New) An apparatus according to claim 67, wherein the valve means has a port having a width which is not constant in the axial direction of the valve arrangement, whereby the effective width of the fluid path to the piston means can be set by setting the axial position of the valve arrangement.

70. (New) An apparatus according to claim 67, wherein the piston means has two opposite faces and the valve arrangement provides drive

alternatively to the opposite faces of the piston means, whereby to create reciprocation.

71. (New) An apparatus according to claim 67, wherein the valve arrangement is formed to complete a plurality of cycles of the piston means for each full turn of the valve arrangement.

72. (New) An apparatus according to claim 71, wherein the valve arrangement has a first axial position in which a first number of cycles are completed for each full turn of the valve arrangement and a second axial position in which a different number of cycles is completed for each full turn.

73. (New) An apparatus according to claim 72, wherein the fluid path to the piston means is relatively narrow in the first axial position, and relatively wide in the second axial position.